

PERSPECTIVE-TAKING AND MENTIONING:
CAN THESE STRATEGIES INCREASE THE ROMANTIC AND SEXUAL DESIRABILITY
OF PEOPLE WITH OBSERVABLE DISABILITIES?

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Perspective-Taking and Mentioning: Can These Strategies Increase the Romantic and
Sexual Desirability of People with Observable Disabilities?

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ABSTRACT

THESIS: Perspective-Taking and Mentioning: Can These Strategies Increase the Romantic and Sexual Desirability of People with Observable Disabilities?

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Previous research has demonstrated that stigmatization of people with disabilities (PWDs) has negative consequences for their romantic opportunities. It has been well established that the cognitive task of perspective-taking of another person has the capacity to alter perceptions of various minority groups for the better. Acknowledging or mentioning a disability has also been shown to have positive social consequences. The present study explored the possibility that romantic or sexual attraction to someone with an observable physical disability could potentially be enhanced through these two processes—perspective-taking and mentioning. A statistically significant interaction emerged between prior interaction experience with people who have disabilities, gender of the target, and perspective-taking. The nature of this interaction was such that participants who did not have experience with people with disabilities and who engaged in perspective-taking with a female target rated her more sexually/romantically desirable than people who rated a male target, regardless of whether they took his perspective, had disability experience, or both. However, because this effect was small and no other analyses revealed significant effects of perspective-taking, caution is warranted when interpreting these results.

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Unexpectedly, mentioning one's disability actually reduced romantic desirability for the target, although this effect was also small. Limitations and suggestions to improve upon this methodology in future research are discussed along with commentary on the use of perspective-taking manipulations more generally.

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Perspective-Taking and Mentioning: Can These Strategies Increase the Romantic and Sexual Desirability of People with Observable Disabilities?

People with disabilities (PWDs) are often the targets of stigma. Research has shown that PWDs are perceived or treated as asexual (Shakespeare, 1999; Shuttleworth, 2000; Taleporos & McCabe, 2001; Nario-Redmond, 2010), incapable of having sex (Esmail, Darry, Walter, & Knupp, 2010), physically unattractive (Nario-Redmond, 2010; Shuttleworth, 2000), and childlike (Shakespeare, 1999; Keller & Galgay, 2010). People who are partners of PWDs are also stigmatized. By virtue of their willingness to enter into a relationship with a PWD, partners tend to be seen as less intelligent and more nurturing (Goldstein & Johnson, 1997) relative to those who enter into relationship with people who do not have disabilities. This stigma-by-association (Neuberg, Smith, Hoffman, & Russell, 2004) might be a potential turn-off, making people less motivated to start relationships with PWDs, as researchers have implied (e.g., Goldstein & Johnson, 1997) and, also, as evidenced by the fact that being stigmatized by others has been shown to factor into attitudes toward dating PWDs (e.g., Gordon, Minnes, Holden, 1990). Consequently, then, not only must PWDs prove that they are worthy of romantic or sexual opportunities, but once they are in an ongoing relationship, they might face the challenge of trying to fend off negative attitudes held by those in their immediate social networks who may not approve (for more information on the potential challenges posed by social networks, see Howland & Rintala, 2001; Shuttleworth, 2000).

While there are reasons other than stigma by association that may lead people to be hesitant to start a relationship with a PWD (for a discussion of other relationship barriers, see Taleporos & McCabe, 2003), stereotypes and stigma of the PWD seem explain in large part the disparity in opportunities for romantic and sexual relationships for people with disabilities.

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Indeed, PWDs—and this is especially true for men and those with severe physical disabilities—were found to be single more often than people without a disability, and being without a partner was associated with symptoms of depression for both those with and without disabilities (Taleporos & McCabe, 2003). Furthermore, interviews with PWDs have suggested that they may be disproportionately overlooked as romantic or sexual partners, though not as friends (Shuttleworth, 2000; Taleporos & McCabe, 2001; Howland & Rintala, 2001). Some PWDs even stop pursuing relationships altogether due to concerns about stigma and/or rejection (Taleporos & McCabe, 2001; Shuttleworth, 2000). Howland and Rintala's (2001) interviews with women with physical disabilities provide additional insight into some of these romantic-related difficulties as well as others. Interestingly, Man, Rojahn, Chrosniak, and Sanford (2006) found that one's physical disability did not simultaneously adversely affect romantic attractiveness. However, in a follow-up study, Rojahn, Komelasky, and Man (2008) found that implicit attitudes toward PWDs did not show evidence of positivity, concluding, in part, that the explicit results of romantic liking of PWDs could potentially have been the result of social desirability. Hergenrather and Rhodes (2007) found positive attitudes toward dating PWDs, especially among undergraduate women, but as a whole, the dating context was perceived as less favorable than work or marriage. The researchers, however, also mentioned the possibility that social desirability influenced the responses.

With the majority of the evidence pointing to negative romantic/sexual relationship prospects and outcomes for people with disabilities, at least two important questions should be addressed: First, are there observer factors associated with a decrease in PWD stigma, which could thereby increase the likelihood that PWDs will be seen as worthy of romantic/sexual consideration? Second, what specific strategies by PWDs (target-to-observer) might help to

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increase their romantic and sexual desirability in a social interaction? The present study explored two factors that may influence a PWD's romantic or sexual desirability at a time when disability is associated with lower social status in society.

In the present experiment, participants were asked to read a fabricated transcript of an interview between a research assistant and a PWD, who was either male or female. Afterward, participants rated the PWD on several dimensions. Participants were assigned to one of four strategy conditions related to perspective-taking, mentioning, or neither, which were designed to affect perceptions of the PWD. The primary dependent variables of interest were perceived sexual and romantic desirability of the PWD. Participants' prior experience interacting with PWDs was also assessed for any potential influence on perceptions of romantic/sexual desirability.

An Observer-to-Target Factor: Perspective-Taking

One factor that might help PWDs to be perceived as more romantically or sexually desirable is *perspective-taking*, a cognitive process that “involves contemplating another person's thoughts, feelings, intentions, and other mental states” (p.786, Todd & Burgmer, 2013). Researchers have viewed perspective-taking as consisting of two different forms and there seems to be little difference between them in terms of their ability to create positive impressions. The first, *imagining-self*, occurs when an observer pictures him/herself in the same circumstances with the same feelings as the target; *imagining-target* occurs when the observer considers what the target is feeling (e.g., Davis, Conklin, Smith, & Luce, 1996; Davis et al., 2004). Some research has found little difference between participants who were assigned to either type of perspective-taking because they both lead to thinking about the self or other (e.g., Todd, Bodenhausen, Richeson, & Galinsky, 2011). Davis and colleagues' (1996) results seemed to

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show no differences either, at least with regard to perceiving the target positively after having engaged in this process, which was the primary concern in the present study. However, Batson and colleagues (1997b) discussed how the two methods of perspective-taking differ in some ways, such as in the level of distress created for the perceiver.

Galinsky and Moskowitz (2000) found that perspective-taking of an older person increased positive impressions of that person and of the stigmatized group more generally. The researchers explained that “the positive effects of perspective-taking occur through increasing the overlap between representations of the self and the target group. Representations of the group are assimilated to the activated self-concept and this process decreased stereotypic responding” (p. 720). Other researchers have also demonstrated that those engaged in perspective-taking can see their own positive traits in a target (Davis et al., 1996; Myers & Hodges, 2012).

Perspective-taking has also been shown to be beneficial when racial prejudice is the topic under study (Vescio, Sechrist, & Paolucci, 2003; Dovidio et al. (2004). Perspective-taking experiences can bring to participants’ attention racial discrimination, which can increase support for affirmative action, as discovered by Todd, Bodenhausen, and Galinsky (2012). In addition, Todd and colleagues (2011) revealed that not only were implicit judgments of a racial minority affected in a beneficial way, but a desire to sit closer to a Black individual was likely the result of having undergone a perspective-taking experience earlier. Extrapolating from these findings, if romantic or sexual desirability toward a PWD can be enhanced through perspective-taking, it might be because stereotypes are being used less or because people eventually see their own positive traits in the PWD.

While empathy was not directly assessed in the present study, any discussion of perspective-taking would be incomplete without it, evidenced by numerous studies over the

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years that have demonstrated that it may be one means by which perspective-taking is associated with good social outcomes. Shih and colleagues (2009) found that empathy mediated perspective taking's association with both liking and helping by a non-Asian participant when the target was Asian. Empathy by way of perspective-taking manipulations have also led people to perceive the homeless—and even murderers—more favorably (Batson et al., 1997a). Interestingly, Wang et al. (2014) found that perspective-taking as an individual difference variable sans empathy was strong enough to predict whether participants would choose to interact with a stigmatized target in the future.

The point here is that perspective-taking appears versatile in its ability to make people feel good about others, therefore, the present study's attempt to increase a PWD's romantic and sexual desirability seems logical and there could be multiple paths through which perspective-taking could be the catalyst for such attraction to arise. In fact, Todd and Galinsky's (2014) review of the perspective-taking literature highlighted some of the various presently-known cognitive and empathetic mechanisms through which it seems to function, and noted that, "An important question then becomes, 'which mechanisms operate when?' Because little research has examined multiple candidate mechanisms concurrently, the answer remains unclear" (p.381). That said, the authors suspected that empathy might play a bigger role in cases where the experience is a negative one.

How is participant perspective-taking usually determined? It has been treated as an individual difference variable assessed through self-report (e.g., Galinsky, Maddux, Gilin, & White, 2008; Barr, 2013; Wang, Tai, Ku, & Galinsky, 2014); Relatedly, some researchers have elected to simply ask participants how much they took the perspective of the target after having undergone the manipulation (e.g., Davis et al, 1996; Todd, et al., 2011). Often, essays written in

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the first-person perspective by participants about a hypothetical target's experience are a manipulation check for perspective-taking (e.g., Galinsky & Ku, 2004; Ames, Jenkins, Banaji, & Mitchell, 2008). Mental state verbs contained within participant narratives have also been used as an indicator of perspective taking (Todd, Simpson, & Tamir, 2016). The literature has not been definitive about what constitutes a perspective-taking narrative and why these verbs might be a viable manipulation check (see Appendix A for some examples from the present study). The present study utilized the non-self-report approach. An important caveat to make at this point is that not all of the research on perspective-taking has led to such hopeful conclusions. For example, research on socially conservative perspective takers who imagined a same-sex couple's sex life resulted in less positive perceptions of the dyad; the authors reasoned that the sexual behavior was inconsistent with certain motivations that the perceivers have, which contributed to their negative responses (Mooijman & Stern, 2016).

It is also important to note that there is evidence that self-esteem can moderate perspective-taking outcomes. Galinsky and Ku (2004) wrote that, “for those with high self-esteem, positive self-concepts are activated and applied to the target during perspective-taking, resulting in an overall positive evaluation of the outgroup. However, for perspective-takers with low self-esteem, no reduction in prejudice occurs” (p. 601). One's self-esteem and feelings about others have been shown to be associated before. As one example, Fein and Spencer (1997) found that participants who had their self-esteem threatened gave more stereotypical ratings to—and saw less friendship potential in—a man they read about whom they thought to be gay. Having negative perceptions of a stereotyped target improved participants' self-esteem. Concerning the present investigation, those who think highly of themselves might be more likely to experience greater romantic or sexual liking for a PWD after perspective-taking has occurred because this

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process awards good feelings from the self to the target. Hypothesis 1-1a are as follows:

H1: Those in the perspective-taking condition will report perceiving a PWD as a more desirable potential sexual and romantic partner compared to those in the control condition.

H1-a: Self-esteem will moderate the relationship between perspective-taking and romantic and sexual desirability scores, such that participants with higher self-esteem scores will report greater desirability of the target compared to those with lower self-esteem scores.

A Target-to-Observer Factor: Mentioning the Disability

Another previously untested factor that could potentially be involved in increasing romantic/sexual desirability of people with disabilities may be simply mentioning, acknowledging, or self-disclosing their disability while interacting with others. A large meta-analysis by Collins and Miller (1994) on self-disclosure more broadly revealed positive results. Among the main findings were that self-disclosing can result in general liking from others; however, the effect size across these studies was somewhat small ($d=.281$). However, as was the case with the perspective-taking literature, previous studies on mentioning a disability have typically operationalized liking in a non-romantic and non-sexual manner. One study showed that appearance of a PWD was enhanced when he mentioned his stuttering disability (Collins & Blood, 1990), although appearance did not seem to reference anything other than whether the target appeared normal to raters, not physical attractiveness. In general, self-disclosure has been found to have good social implications. Scior, Connolly, and Williams (2013) discovered that participants who read vignettes about a person with an intellectual disability in which the diagnosis was labeled ended up viewing PWDs in a less stigmatized fashion and were more open to interacting with them than those who read the vignettes without the label. Moreover, people's choice to spend time socializing with a person in a wheelchair has also been found to depend on

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whether a PWD mentions her condition or not when asking for help. When the condition was mentioned, the target of the request subsequently wanted to spend more time socializing; however, trait ratings of the PWD were generally not impacted (Mills, Belgrave, & Boyer, 1984). Insight into the potential benefit of bringing up one's disability in romantic contexts may also be drawn from research taking place in employment settings. When participants were asked to evaluate applicants in a mock interview setting, those who acknowledged their disability were rated as more suitable for jobs, such as being a doctor or lawyer than those who did not acknowledge, but who could clearly be seen as having had some sort of impairment by being in a wheelchair (Hebl & Kleck, 2002). However, in a study based in Hong Kong, disclosing a disability also seemed to deter employers from following up on job applications by PWDs (Pearson et al., 2003). Why does acknowledgment or disclosure generally have positive social consequences? Scior and colleagues (2013) wrote that labeling those vignettes reduced stigma for those with intellectual disabilities because, without labels, participants were likely to attribute indicators of a disability to causes that placed the PWD in a negative light. It was specifically attribution to biomedical causes that was associated with being open to interacting with these PWDs. Feelings of compassion were one of the reactions for the biomedical causes (Scior, et al., 2013). Hastorf, Wildfogel, and Cassman (1979), for example, felt that mentioning a disability relaxes those people who are around the PWD.

Stealing thunder is a concept that is relevant here, providing further indirect justification for positing that mentioning a visible disability might help facilitate romantic or sexual desirability of a PWD. To date, it does not appear that this concept has been directly investigated as it relates to disability disclosure. *Stealing thunder* (McElhaney, 1987 as cited in Dolnik, Case, & Williams, 2003) refers to information about a person that normally would be considered

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negative, which one discloses first before it is otherwise revealed (Dolnik, et al. 2003; Wigley, 2011). When this happens, the negative impact of the information is lessened. Studies of public figures who have committed infidelity demonstrated that they received less negative media attention if they acknowledged the infidelity outright (Wigley, 2011). Dolnik and colleagues (2003) conducted a study using a mock jury and found that damaging evidence that could potentially convict a defendant is perceived as less powerful if the defendant has a chance to steal thunder because people change their perceptions of the information. Especially relevant to the goals of the present research, one study found that men appeared to be more willing to go on a coffee date with a woman who stole thunder by mentioning that she had a stigmatizing health condition: herpes (Zablocki, 1996 as cited in Williams & Dolnik, 2001). Caution is warranted when interpreting these findings, though, because they did not reach conventional levels of statistical significance, presumably due to the study's small sample size (Williams & Dolnik, 2001).

Obviously, disabilities that are visible may already inherently and implicitly present an observer with a lot of information, some of which may be inaccurate. For example, a review of the literature has been used to argue that physical disability's relationship with prejudice may implicitly stem from people's concern with diseases at some point in evolutionary history, even when such a concern might be irrational (Park, Faulkner, & Schaller, 2003). The scholarly discourse on visible features of a person that are stigmatized, such as gender, but which may cause problems under certain conditions are also relevant (Quinn, 2006). Taken together, it might be difficult for a PWD to steal thunder to enhance his or her romantic and sexual desirability in any meaningful way. These limitations notwithstanding, Hypothesis 2 is as follows:

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H2: A PWD who mentions his or her disability will be rated higher on measures of romantic/sexual desirability than a PWD who does not mention having a disability, but visibly appears to have one from a photograph.

Furthermore, it was suspected that the combination of perspective-taking and mentioning could potentially yield an additive effect, resulting in the highest ratings of PWD romantic and sexual desirability. Therefore, Hypothesis 3 is as follows:

H3: Participants in the *perspective-taking and mentioning* condition will rate a PWD higher on measures of romantic and sexual desirability than participants in either of the other two conditions.

Personal Contact with PWDs

Allport (1954), as cited in Pettigrew (1998), asserted that certain criteria need to be met before opposing groups begin to perceive each other less negatively. Among the information contained within Pettigrew's (1998) review of the intergroup literature where a deeper-look of this concept took place, friendship-liking was listed as key to contact's ability to reduce prejudice between groups. Pettigrew and Tropp (2006) conducted a meta-analysis of 93 different samples and found that contact was negatively correlated with physical disability prejudice ratings ($r = -.243$). Although having personal contact did not seem to affect dating desirability of PWDs in a cross-cultural study (Chen, Brodwin, Cardosa, & Chan, 2002), other research has shown that undergraduates who have a family member with a disability may be biased—that is, more attracted to other students who have disabilities than those without disabilities (Rojhan et al., 2008). Therefore, Hypothesis 4 is as follows:

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H4: Participants who report having personal experience interacting with a PWD, such as a spouse, friend, family member, or coworker, will report higher ratings of romantic and/or sexual desirability toward a PWD than those without such relationships.

No specific hypotheses were advanced regarding gender differences in the degree to which PWDs are perceived as romantically or sexually desirable. However, participant gender (men and women) was tested as a moderator variable for exploratory purposes.

Method

Materials

Photographs and fabricated short interview transcripts. Photographs of one man and one woman (both in wheelchairs) were obtained from the internet via AdobeStock.com. Each photograph was paired with a fabricated interview transcript (see Appendix B), supposedly conducted at Ball State University between the photographed person (supposedly 27 years old) and a research assistant. Pilot tests revealed that the photographs were shown to be near neutral in physical attractiveness and were seen as similar in age. In addition, participants indicated that they noticed the wheelchairs. The interviewee was depicted as mostly thinking and behaving positively, which could be important because, for example, Hastorf et al. (1979) noted that previous attempts to study mentioning's effectiveness could have been hindered by negativity. There was no mention of any romantic or sexual obstacles in the present study.

The only exception to having the interviewee maintain a positive outlook was that the PWD alluded to challenges, but qualified his or her statements by saying that it does not really affect them too much. It was deemed important to include this exception because challenges are a normal consequence of having observable disabilities, and to exclude such talk would probably not make for a realistic or believable interview about the lives of people with disabilities. The

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content of the structured interview transcripts included friendships, jobs, likes, dislikes, hobbies, and future plans. All transcripts were identical across conditions, except for the gender of the PWD and whether he/she mentioned having a disability.

Questionnaires. The survey contained several questions pertaining to participant demographics, as well as perceptions of the personality traits and other characteristics of the interviewee. These characteristics were rated on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). Most questions served only as filler or distraction and were therefore excluded from the primary analyses (see Appendix C). Additionally, the Rosenberg Self-Esteem Scale (*RSE*; Rosenberg, 1965) was used to assess whether those who indicate higher levels of romantic/sexual attraction also tend to have higher self-esteem, as stated earlier. Also, embedded in the survey were Likert-type scale items pertaining to the dependent variables of interest (see Appendix D). These included the Romantic Attraction Scale (*RAS*; Campbell, 1999). Internal consistency of the *RAS* was good ($\alpha = .89$). This scale is designed to measure the degree of romantic attraction present using five 7-item Likert-type questions. These items were administered twice, with the wording slightly modified the second time to tap into sexual desirability (see Appendix D). An open-ended question was included in which participants were asked to explain why they feel the way they do regarding their romantic attraction to the PWD.

Manipulation-check questions specific to each condition were provided to make sure that the independent variables operated as intended (described later in the procedures section). Finally, the following hypothesis-guessing question was included at the end of the study: “What do you think the purpose of this study was?”

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Participants

Participants for this study were recruited online from Ball State University email listservs, Amazon's Mechanical Turk (Mturk), and an online research listing maintained through Hanover College for a study entitled: *A Study of Social Impressions with Limited Information*. There was no limit on the number of participants allowed into this study. Inclusion criteria consisted of being 18 years of age or older and having proficiency in English. Participants were told that their participation was voluntary and that informed consent would be collected. Upon completion of the survey, participants had the option of being entered into a drawing for a \$25 Amazon E-Gift card. Two winners were randomly chosen upon completion of data collection. Mturk Participants were each compensated fifty cents apiece.

Procedure

Participants were directed to Qualtrics to view and agree to a consent form; afterwards, they provided basic demographic information. Following this, participants were randomly assigned to one of these conditions: *mentioning*, *perspective-taking without mentioning*, *perspective-taking with mentioning*, and *no mentioning and no perspective-taking*. Whether they were presented with a photograph of a male or female PWD paired with an interview transcript was determined by whether they indicated that they were heterosexual or homosexual on the demographics questionnaire (by contrast, participants who identified as asexual, bisexual, or pansexual were randomly assigned to either the male or female target). Participants first read the brief interview transcript, and then completed the questionnaire described earlier. Upon completion of the study, participants were thanked for their participation.

Cover story. Participants were presented with the following description of the study before beginning:

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The purpose of this study is to better understand social impressions and whether people agree and disagree about the likely traits and characteristics of a person about whom they have only learned a very small amount of information. After you have given your consent to participate, you will be asked to fill out basic demographic information. You will then be randomly assigned an interview transcript to read about someone's cultural background or life experience. Once you have read the interview, you will be asked to complete a brief questionnaire about the person. In total, this study will take approximately 20-30 minutes to complete.

In reality, each participant read the same interview involving a person who has paraplegia.

Perspective-taking conditions. Participants were instructed to take the perspective of the PWD being interviewed in the following way: *“Now that you have read the transcript, please take approximately 5 minutes to write a short narrative describing the typical day in the life of Michael/Brittany in the box below. As you are writing, imagine what Michael/Brittany might be thinking, feeling, and experiencing as if you were him/her looking at the world through his/her eyes and as if you were in his/her shoes.”* One could argue that the perspective-taking manipulation confounds both forms of perspective-taking: imagining-self and imagining other (e.g., Davis, et al., 1996; Davis et al., 2004) because it asks participants to imagine what Michael/Brittany might be thinking, but then also asks for participants to picture themselves in their shoes. This possible confound was overlooked in the study design; however, as cited earlier, there is at least some evidence to suggest that the two forms of perspective-taking have similar outcomes, which reduces concern about how this might have impacted the results. Also, depending on condition, the language was made to be consistent with whether participants were viewing a male or female target. These instructions were partially adapted from a study by Todd

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et al. (2012): “*vividly imagine what the target person might be thinking, feeling, and experiencing during the day*” (p. 740). In part, these instructions were also drawn Galinsky and Moskowitz (2000): “*imagine a day in the life of this individual as if you were that person, looking at the world through his eyes and walking through the world in his shoes*” (p. 711). However, being that the PWD in the present study was confined to a wheelchair, the word “walking” was omitted.

Mentioning conditions. Participants in this condition saw a transcript where the PWD states, “*I am in a wheelchair because of this paralysis—I’ve had paraplegia since birth; it has its challenges, obviously, but nothing I can’t get past.*” In the *no mentioning* condition, the sentence was modified slightly: “*Life has its challenges, obviously, but nothing I can’t get past.*”

Manipulation checks were provided at the end of the questionnaire to ensure that participants noticed that the PWD mentioned having a disability: “*Did [name of the interviewee] mention having a disability in the interview?*” Possible answers were dichotomous: *yes/no*. There was also a check to ensure that participants did not unintentionally take the perspective of the person in this mentioning condition.

Preliminary Analysis

Narratives and Manipulation Checks

The content of participants’ essays served as a manipulation check for perspective-taking. Two graduate students who were unaware of the experimental condition began coding the narratives for indicators of perspective-taking. A random sample of approximately 20% of narratives was selected using *SPSS 24 software*. These data were restructured so that condition labels were removed. These essays were then transferred to *Microsoft Excel 15* for easier coding.

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Indicators of perspective-taking were based on whether narratives were written in the first person or if there were instances of mental state verbs as described earlier. In the first round, each verb was assigned 1 point. If participants wrote in the first person, an additional point was given. Interrater agreement was poor initially. One major concern was whether participants were truly perspective-taking or simply stating an observation from memory from having read the interview transcripts and whether this should count. Given that the transcripts already had Michael or Brittany describing some personality traits, as well as some other likes/dislikes, then participants might have been simply regurgitating the information.

To resolve the interrater disagreement, the following logic was applied: participants would likely have to use of the same information presented in the transcript in order to truly put themselves in the targets' shoes. Any references in the narratives that were also present in the transcript already (e.g., that Brittany loves dogs) were still deemed acceptable, but to qualify as perspective-taking, either 1.) first-person language or 2.) mental state verbs referring specifically to the target's state of mind had to be present.

Each appropriate mental state verb was counted as 1 point, and if participants wrote their narrative from the first-person perspective, they were given an additional point. While remaining unaware of the experimental condition, another 25% of narratives were randomly selected and the author of this paper coded them for perspective-taking along with one independent coder. Correcting the coding scheme in this way resulted in excellent interrater agreement (Cohen's $K=.80$). The author felt comfortable coding all of the narratives that remained while staying blind to condition.

The strength of the perspective-taking manipulation was determined by creating a new grouping variable. One group consisted of those who were assigned to any perspective-taking

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condition, the other group consisted of the non-perspective-taking conditions. Perspective-taking count was used as the outcome variable. In the manner of Todd et al. (2016), a *t-test* showed that the narratives written in the perspective-taking conditions consisted of more perspective-taking instances ($M = 2.14$, $SD = 1.32$, $n = 149$) than in the other conditions ($M = .87$, $SD = 1.12$, $n = 238$), and the effect size was large ($d = 1.03$, $p < .001$). There were violations of normality and outliers, but this was to be expected, given that some people had many counts of perspective-taking while others had very few.

Many people ($n = 118$) were coded as having instances of perspective-taking even when they were not given the manipulation. Follow-up tests of age, gender (men vs. women were chosen because these were the two biggest groups), and country of residence (India vs. the United States were chosen because they were the two biggest groups) indicated that this other group of perspective-takers only differed from the control group on the country in which they resided, ($X^2(1) = 4.21$, $p = .04$). These control group perspective takers were comprised of slightly more people from India (18.87%) and the U.S. (81.13%) compared to those in the control group who did not perspective take, (India = 9.18%, U.S. = 90.82%). It is therefore possible that these participants differ in perspective-taking propensity at the cultural level. There is also the possibility that the manipulation-check and/or the manipulation itself was too imprecise. The present analysis therefore differentiated between these two groups of perspective-takers: experimental perspective-takers and non-experimental perspective-takers (hereby referred to as NEPTs for convenience).

Exploratory Factor Analysis

Attempts to locate studies that both employed the RAS (Campbell, 1999) and examined its factor structure were unsuccessful. Therefore, because the RAS has—to the best of the

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author's knowledge—not been well-vetted, and because the scale was adapted for the present study to include sexual attraction/desirability items, an *Exploratory Factor Analysis* (EFA) was conducted to determine the underlying factor structure. To determine the number of factors to extract, the following analyses were performed in *R Studio 1.0* software: scree plot, parallel analysis, residual correlations, optimal coordinates and acceleration analyses. A factor solution between one-and-three was deemed likely for all 10 different scale items.

Different combinations of rotations and extractions were used to determine the underlying factor structure. Because the factors were correlated, *Principal Axis Factoring (PAF)* with *Promax* and *Direct Oblimin* rotations were each used to assess one, two, and three factor models. Items loading $\geq .3$ on one factor was the criterion chosen to identify simple structure. Considering the overall theme of the EFAs, Table 1 shows that one factor accounts for about 64% of the variance in the responses to all 10 items. An additional 11% of the variance was explained by adding a second factor. The presence of a third factor would account for a total of 81% of the variance in item responses, which was not substantial enough to warrant a three-factor model. A two-factor solution would be reasonable considering the two dependent measures used in the present study.

Further inspection of the factor loadings, however, raised some concerns. The EFAs revealed a pattern such that 6 of the 10 items (3 for sexual desirability and 3 for romantic desirability) tended to load on a single factor. Two items were problematic because they appeared to cross load or simply load on an unexpected factor. One set of factor loadings are presented in Table 1 and reflect a similar trend across the different extraction and rotation types described above. In retrospect, item 4, “*How would you feel about yourself if you were having sex with Michael?*” and especially item 5, “*How do you think your friends would feel about you*

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if you were having sex with Michael?” may not have adequately addressed the hypotheses of the current study, even if they happen to be subscales/components of the same construct.

Conceivably, how one feels about having sex with a target person may not necessarily be telling of the target’s sexual appeal to the observer. Furthermore, what a person’s friends think of his/her romantic involvement with a target person may or may not speak to the target’s actual romantic or sexual attractiveness in the eyes of the participant, which was the purpose of the present study.

Given that the romantic items and sexual items, which were created by merely modifying the wording of the romantic attraction items collapse onto a shared factor and that the correlation between romantic and sexual desirability variables was reasonably high ($r = .84$), it was deemed reasonable to create a composite variable. This variable consisted of the three romantic and the three sexual desirability items that all loaded together on one factor. The minimum score possible was 6 while the maximum score was 42.

Results

The reliability estimates were excellent for the composite measure of romantic desirability ($\omega = .964$; $\alpha = .962$). From the initial overall sample ($N = 530$), 143 participants were excluded from further analysis for the following reasons: A.) being in one of the perspective-taking conditions but failing the perspective-taking manipulation check (i.e., receiving a coding score of zero), B.) being in one of the mentioning conditions but failing the mentioning manipulation checks (i.e., reporting Michael/Brittany did not mention their disability when they did, or reporting that they did mention a disability when they did not), C.) either constructing incoherent narratives, using stories that were copied from the internet, or not completing narratives at all, D.) suggesting that Michael and Brittany were fictional characters ($n = 2$), and

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finally, E). guessing a specific hypothesis of the study ($n = 1$). The final sample ($N = 387$) had an age range from 18-98 ($M = 33.26$, $SD = 12.91$). See Table 2 for more demographic information. After the exclusions, a one-way ANOVA was conducted to ensure ages were still equivalent across conditions. Univariate outliers were present for age, which was to be expected given the large age range in this study. A natural log transformation corrected for normality, and there were no significant differences across conditions with respect to age. However, Levene's test was not violated for assumption of equal error variances.

Hypothesis 1-3

Experimental perspective-takers. To test whether perspective-taking and/or mentioning increases a PWD's romantic/sexual desirability, a 2 (experimental perspective-takers: yes/no) \times 2 (Mentioning: yes/no) \times 2 (Target gender: man/woman) ANOVA was performed. Assumptions of scale of measurement, Levene's test of equal variances, independence, and normality were met. The interaction of perspective-taking and mentioning was nonsignificant at $\alpha = .05$, ($p = .205$). The main effect for perspective-taking was not significant either ($p = .759$). However, the main effect of mentioning the disability was significant, $F(1, 379) = 4.65$, $p = .032$, partial $\eta^2 = .012$. When the target mentioned his or her disability, he or she was perceived as less desirable ($M = 22.88$, $SD = 10.34$) compared to when the disability was not mentioned ($M = 24.08$, $SD = 10.02$). Table 3 presents the means and standard deviations of romantic/sexual desirability in each of the experimental conditions.

There was a significant main effect of gender of target, $F(1, 379) = 19.61$, $p < .001$, partial $\eta^2 = .049$, such that Brittany was rated more romantically desirable than Michael ($M = 25.84$, $SD = 10.36$ and $M = 21.06$, $SD = 9.74$, respectively). When a measure of social

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desirability (Stöber, 2001) was added to the model as a covariate, the results were nearly identical to those above, except mentioning of the disability was no longer significant, $p = .054$).

The next analysis was to determine whether self-esteem moderated the relationship between experimental perspective-takers and finding a PWD romantically desirable. To accomplish this, self-esteem, as a continuous variable, was first entered as a covariate into the same ANOVA model as the first analysis, but a custom model was created to make the interaction term between self-esteem and perspective-taking. Self-esteem was not significant as a moderator of perspective-taking, $F(1, 383) = .047, p = .829$.

In sum, hypothesis 1-3 were unsupported. Mentioning was significant, but opposite of the predicted direction, having a negative effect on romantic desirability ratings; however, the effect size was small. Perspective-taking and the combined perspective-taking and mentioning conditions did not significantly affect a PWD's desirability in the eyes of participants. There was an effect of target gender, though, with Brittany perceived as more desirable overall as a romantic partner compared to Michael. The effect for this gender result was medium in size. Table 4 shows romantic/sexual desirability ratings by all conditions. Most values are close to the midpoint.

Hypothesis 4

Participants' responses to the item, *"Do you have any experience interacting with other people with physical disabilities, such as at a school, in the workplace, or in your family?"* were coded by the author. Those who reported currently or previously having had a coworker, clients in a clinical setting, friends, students, boyfriends/girlfriends with disabilities were coded as 1, whereas those who suggested or implied they had never had an encounter with people with disabilities, or reported only brief interactions, such as simply seeing PWDs around their

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apartment complex, but otherwise having no ongoing interaction were coded as 0. An independent samples t-test revealed that participants who had disability interaction experience with PWDs were no different in their romantic/sexual attraction to them compared to participants who did not have such experience. Hypothesis 4 was therefore not supported.

Non-Experimental Perspective-takers. To analyze potential effects for the non-experimental perspective-takers (NEPTs), a separate analysis was preformed identical to the previous ones, except, that a new grouping variable was coded as follows that differentiated NEPTs from those in the other conditions: 1 = experimental perspective-takers, 0 = control participants, 2 = NEPTs. The NEPTs did not significantly differ from the experimental group or control perspective-takers in any of the tests.

Exploratory analyses

First, an exploratory analysis of whether gender of participant moderated the effects of perspective-taking and/or mentioning was performed. This involved a 2 (perspective-taking: yes/no) x 2 (mentioning: yes/no) x 2 (gender of participants: men/women) ANOVA. Results showed that only the main effect of gender of participant was significant, $F(1, 354) = 37.59$ $p < .001$, partial $\eta^2 = .096$. Gender of the participant did not interact with perspective-taking or mentioning, or perspective-taking and mentioning combined. Self-identified male participants tended to rate their target higher on romantic/sexual desirability ($M = 27.24$, $SD = 9.58$) than self-identified female participants ($M = 20.76$, $SD = 9.59$). Gender of the participant also did not interact with perspective-taking, mentioning, or both together among the NEPTs.

Second, since perspective-taking was coded by counting the number of instances of mental state language or first-person language, it was possible to test whether the number of instances correlated with the romantic/sexual desirability measure. There was a moderate

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positive correlation between these two variables, although it was not statistically significant ($r = .62, p = .221$). Third, recall that the age range of the present sample was vast: 18-90. Some participants expressed concern about having romantic or sexual interest in someone who is not close to their own age. As an exploratory analysis, an age variable was created; those under the age of 30 were coded as 1 and those 30 or above were coded as 2. Results of an ANOVA showed no significant main effect of participant age for the experimental group, control group, or the NEPTs group; furthermore, age of participant did not moderate perspective-taking or mentioning or interact with target gender.

While disability experience alone did not significantly affect perceptions of the PWDs' sexual/romantic desirability, does perspective-taking or mentioning interact with disability experience? To explore this question, a 2 (perspective-taking: yes/no) x 2 (mentioning: yes/no) x 2 (disability interaction experience: yes/no) x 2 (gender of target: Michael/Brittany) ANOVA was performed, showing that only the significant three-way interaction between gender of target, perspective-taking, and disability interaction experience was significant, with a small effect size, $F(1, 371) = 5.49, p = .020$, partial $\eta^2 = .015$. Social desirability as a covariate did not eliminate this effect. Tukey's Honest Significant Difference test was used in *R Studio 1.0* software to determine which levels of the three variables were statistically significant different, while controlling for type 1 error. The equality of variance assumption was met. Participants who rated Brittany, did not perspective-take, and had no experience interacting with PWDs rated her more desirable ($M = 29.37, SD = 9.57$) compared to both 1.) those who rated Michael, did not perspective-take, and had no experience interacting with PWDs ($M = 20.14, SD = 9.53$, with 95% mean difference CIs [1.87, 12.90], $p = .001$), as well as 2.) those who rated Michael, did not perspective take, and had experience interacting with PWDs ($M = 22.04, SD = 8.89$, with

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95% CIs [1.77, 12.84], $p = .001$). Finally, those who rated Brittany, did not perspective-take, and had no experience with PWDs rated her more romantically and sexually desirable ($M = 29.37$, $SD = 9.57$) than those who rated Michael, engaged in perspective-taking, and also had experience interacting with PWDs ($M = 21.46$, $SD = 9.72$, with 95% CIs [1.38, 13.83, $p = .005$). No other comparisons were statistically significant. The three-way interaction between the NEPTs variable, disability interaction experience, and gender of the target was not significant.

Discussion

This study investigated whether taking the perspective of someone with an observable physical disability and/or hearing a PWD mention his/her disability would increase dating desirability. Despite numerous studies showing that perspective-taking is a powerful mechanism to reduce stereotypes (for more review see Galinsky et al., 2005) and some studies showing that mentioning or labeling of a disability has positive consequences (e.g., Collins & Blood, 1990; Scior et al., 2013), the present findings did not generally reveal evidence that these strategies extend to increasing romantic/sexual attraction in any meaningful way towards people with disabilities. Participants who took the perspective of a woman (Brittany) or a man (Michael) with supposed paralysis did not differ from those who did not engage in this cognitive process with respect to their romantic feelings about the PWD. In addition, when Michael or Brittany mentioned the disability, they were not perceived to be more romantically or sexually attractive; rather, unexpectedly, there was a statistically significant reverse trend, such that mentioning the disability actually appeared to undermine romantic and sexual desirability. Disability interaction experience alone did not influence participants' romantic or sexual attraction to the targets, which is consistent with the previously mentioned findings that, cross-culturally, personal contact did not affect PWDs dating desirability (Chen et al., 2002). However, in the present

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study, there was a statistically significant interaction that emerged for perspective-takers with disability experience, depending on which target they viewed. Brittany was rated as simply more desirable than Michael overall. Michael was rated less romantically attractive even when people took his perspective and/or had prior experience interacting with PWDs. Nevertheless, the effect size was small and no significant effect was present when analyzing the NEPTs variable to differentiate experimental perspective-takers from people in the control group who engaged in perspective-taking.

Perspective-taking did not reach statistical significance in any other analyses, nor did having disability experience. Notably, gender differences in the literature that would explain this finding could not be found, as it has not typically been an important contributor to perspective-taking's effects in many studies (e.g., Batson et al., 1997b; Dovidio et al. 2004; Galinsky & Ku, 2004; Galinsky et al. 2008; Ku et al. 2010; Todd et al. 2012). In the few cases where gender differences have been reported, it has been women who either had greater overlap with the target (Davis, et al. (1996) or who scored higher on differences in perspective-taking (Barr, 2013) or empathy (Vorauer & Sasaki, 2009) than men. Galinsky et al. (2008) found that gender was not a significant predictor of a successful deal in mixed-dyad negotiation situations where perspective-taking took place. All the results presented in the current study must be taken with caution and should therefore be replicated before firm conclusions are drawn.

Limitations

It is possible that the manipulations used in the present study were adequate and that perspective-taking and mentioning simply are not a very strong way of increasing the romantic or sexual desirability of PWDs. However, it is also possible that the non-significant or weak findings are attributable to poor manipulations and the nature of the stimuli used. Recall that

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either first-person language or mental state verbs were used as evidence for perspective-taking. Many of the participants in the present study who used mental state terms in their narratives were probably simply describing what they knew about the targets from the written transcripts, using mental state verbs where appropriate to state what the target might feel or think; however, they may have done so without fully or sufficiently switching their perspective to that of the target's or envisioning themselves as the target. Thus, while the manipulation check was successful, the criteria used for perspective-taking could have been stronger. While there was an interaction between having disability experience, target gender and perspective-taking, more research is needed to understand whether this was due to the manipulation working or if this can be explained by some other effect entirely.

Interestingly, only 31 responders in the perspective-taking conditions spontaneously used first-person language, thus this could not be the sole criteria used for coding. However, this may have been the preferred approach to use had there been more participants who did so. A look at Appendix E should give readers the impression that the narratives that use first-person language are qualitatively different from the narratives that use a third-person perspective. In the former, the participant explicitly adopted the perspective of the target in a self-as-other manner. The latter narrative style seems reminiscent of someone memorizing minute details of the interview transcript to describe the target, rather than putting him- or herself in Michael or Brittany's shoes. Additional evidence of manipulation weakness was discovered in exploratory, post-hoc analyses, which suggested that both experimental perspective-takers and NEPTs did not rate the targets lower on known disability stereotypes compared to those in control conditions. This seemingly contradicts numerous previous studies showing that perspective-taking has

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stereotype/prejudice reduction abilities. Perspective-taking was therefore probably not adequately induced in this study.

Casual interview transcripts with an accompanying photo may not have been the best choice of stimuli. Mentioning had a significant main effect in the direction opposite of what was predicted. A simple explanation might be that when participants learned that Michael or Brittany were in the wheelchair because of paraplegia, this caused them to rate them less romantically and sexually desirable because this kind of disability could have been a turn-off for them. In the control condition, participants were not aware of the severity of the disability. It was cited earlier that the more severe a disability is, the more likely people are to be single (Taleporos & McCabe, 2003), which points to another limitation: different disabilities types should have been considered. Nevertheless, the negative effect on romantic desirability was small in the present study and disappeared when social desirability was added as a covariate; as such, the practical implications of this finding are probably minimal, but deserving of further research.

Moreover, participants might have felt like passive observers to the interview conversation rather than someone who needed to be actively engaged. There is some evidence to suggest that being the direct target of disclosure will induce more feelings of liking than being a passive observer (Collins & Miller, 1994). A generic measure of liking was not included in this study, therefore, that alternative possibility cannot be ruled out. A real-life interaction in which participants themselves were the targets of self-disclosure likely would have been even more engaging.

The present study could have also benefited from measuring feelings such as anger, pity, or other emotions in order to understand if and how both manipulations were working. However, in the instance of empathy and race, for example, researchers have claimed that “Empathizing

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with the victims' negative reactions may have interfered with the students' abilities to experience the more positive emotions (e.g., compassion, understanding) associated with reactive empathy" (Finlay & Stephan, 2000, p. 1732). Conceivably in a similar manner, various emotions elicited while taking the perspective of Michael or Brittany have thwarted any possible feelings of romantic or sexual attraction that the perspective-taking mechanism could have otherwise helped to facilitate.

The null findings may be at least partially explained by the failure to take account of marital status of the participants, or the target's responsibility for his or her condition. For example, some participants stated that the age difference was a turn-off for them. Personal responsibility for the target's condition was not made clear in the interview transcript and perspective-taking/empathy manipulations have been shown to be less effective when the target is perceived as responsible for the stigmatized condition (e.g., Batson et al., 1997a). The same can be said for mentioning (Hebl & Kleck, 2002). Participants in the present study were made to believe the target had been disabled with paraplegia since the age of 10, but it was not revealed whether the target was somehow responsible.

Culture and ethnicity may also be important factors to consider when studying perspective-taking, mentioning and romantic or sexual attraction. For example, Chen et al. (2002) found that American college students tended to perceive PWDs as more desirable as dating or marriage partners compared to students residing in Taiwan and Singapore, but students in Singapore had more positive attitudes towards dating and marrying PWDs than in Taiwan. Similarly, Man et al. (2006) found that PWDs were rated as more romantically attractive if they were of the same race as the raters.

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In the present study, having participants answer questions about their desires to have sex with Brittany or Michael may have caught them off guard given that the preceding questions were about trait impressions about the target, although the cover story indicated that the goal was to understand the consensus about traits that targets possess. However, explicitly labeling the study as a dating desirability or a romantic attraction study could have led to social desirability responding, which may have been the case in previous studies of PWDs that used the RAS scale (see Man et al., 2006; Rojhan et al., 2008).

Future Research

Future researchers will likely want to further consider whether timing of disclosure and acknowledging a disability affects perceptions of romantic or sexual attractiveness. In job interview contexts, participants who were asked to evaluate job applicants being interviewed liked the applicants more, and thought they were worthier of being hired when disclosure of a nonvisible disability happened earlier as opposed to later in the interview (Roberts & Hoff Macan, 2008). Hebl and Skorinko (2005) demonstrated that acknowledging a disability (which was clearly visible) near the beginning of an interview, as opposed to the end, resulted in rating the target as more suitable to be hired compared to those who mentioned their disability later. Perceptions of the PWD's well-being explained this finding. Goodman's (2008) dissertation research showed that it is those with visible stigmas who might benefit socially from bringing up a visible stigma early; those whose stigma cannot be seen, though, are at a disadvantage when mentioning it early. Therefore, people with disabilities who have visible markers, such as being in a wheelchair, may also benefit from early disability disclosure or acknowledgement in cases where their romantic/sexual suitability as a romantic or sexual partner is being evaluated.

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What are the implications of the present findings for researchers who wish to study perspective-taking? Perhaps when respondents are provided too much information about the target person, then asked to write about a person, they may be tempted to restate without engaging in deeper processing of the target's perspective. The perspective-taking literature has not been very clear on what exactly a perspective-taking narrative looks like. Researchers should report more details going forward. It is advised that manipulations of perspective-taking provide more specificity regarding how participants are to construct narratives when using this manipulation approach than extant research has provided to avoid any potential problems with interpretation of instructions. This would also help researchers to more readily assess whether perspective-taking truly occurred. In fact, a stronger manipulation might require asking participants to write their essay in the first-person, similar to the manipulation used by Vorauer & Quesnel (2013) or the manipulation used in Weyant's (2007) research, who would likely recommend that perspective-taking studies take this approach. This notion that perspective-taking manipulations are susceptible to problems might be what Galinsky, Ku, and Wang (2005) referred to when claiming, "the beneficial outcomes of perspective-taking did not survive minimal manipulations: simply telling people to take another's perspective, without telling them how to do so, does not seem to have a discernable impact on social behavior" (p. 120). Another potential downfall of perspective-taking can be found in Mooijman and Stern's (2016) research, which implied that one's motivations, as well as what elements of the target are attended to when engaged in perspective-taking can be potentially harmful.

Future researchers should probably routinely consider individual differences in the tendency to perspective-take. In the current study, a subgroup of participants engaged in perspective-taking despite not being instructed to do so. It cannot be discerned why these

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participants did this, although there did appear to be a cultural difference. Moreover, when talking about empathy, Davis and colleagues (2004) suggested that, “. . . a ‘true’ control condition in which observers receive no instructional set produces a pattern of cognitions identical to that produced by imagine-target instructions, leading to the intriguing possibility that the ‘natural’ tendency of observers is to imagine the perspective of the target” (p. 1632).

Regrettably, the author of the present study purposefully omitted using an actual individual difference measure of perspective-taking out of concerns regarding survey fatigue. In general, the NEPTs did not seem to differ with respect to their perceptions of the target in the present study. It might be that the NEPTs are natural perspective-takers, or potentially that the perspective-taking manipulation and coding criteria were insufficient. Nevertheless, one strength of the current work may be that while NEPTs remained in the control in the initial analysis, a second separate set of analyses allowed them to be their own group for comparison rather than to not account for the possibility that they could have contaminated the control group. Davis and colleagues (2004) provide more insight into why people who seem to naturally perspective-take have not been a topic under consideration in empathy and, presumably, perspective-taking studies more generally.

It does not appear that researchers have specifically addressed that many analyses of perspective-taking have seemingly allowed NEPTs to remain in the control group. In such cases, the success of the manipulation is contingent solely upon the experimental group having engaged in more perspective-taking than those in control conditions. For example, Todd and colleagues (2016) noted that, “as expected, perspective takers used more mental-state verbs than did control participants. . . .” (pp. 1584-1585). It is unclear to what extent this is potentially problematic. Perhaps leaving NEPTs in the control group is only a potential concern when there is an

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inordinate amount of them, such as in the present study ($n = 118$), which necessitated their placement in their own group to assess any potential differences. As previously stated, the NEPTs did not generally seem to differ with respect to their perceptions of the target.

Rather than having participants judge a PWD's sexual or romantic attractiveness based on a photograph and an interview transcript, a PWD talking about his or her experiences on video may be more impactful as observers could see the target's facial expressions, mannerisms, and so forth. Several successful perspective-taking studies have had targets appear in video (e.g., Davis et al., 2004; Davis et al., 1996). Another possibility would be to have participants interact with a PWD in a conversational context while engaging in perspective-taking and then measure the observer's romantic or sexual attraction to the target. Manipulations that ask participants to perspective-take during an interaction have been employed before, such as in a buyer-seller negotiation setting (Galinsky et al., 2008).

Concluding Remarks

Insofar as can be discerned, the present study was the first attempt to investigate whether both perspective-taking of a PWD and having the PWD mention or acknowledge a visible physical disability could make him or her more desirable as a potential romantic or sexual partner—something that many people with disabilities have trouble with—as opposed to influencing general liking. Despite the limitations of the present study, it would be worth further investigating the potential effects of mentioning and perspective-taking because they may still hold promise. The present study provided one definite avenue for future perspective-taking research in this area because it was shown to interact with gender of target and disability experience. This study also contributes to the existing literature by highlighting some of the pitfalls that could potentially arise from studying perspective-taking using previously well-

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established manipulations; as previously discussed, however, this notion that common perspective-taking manipulations may be flawed is not entirely novel. Hopefully, this research will provide the impetus for more research in the area of perspective-taking, mentioning, and attraction as well as enhance the understanding of perspective-taking processes more generally. In addition, it is hoped that this research will stimulate more attention to the subject of persons with disabilities and the struggles they encounter in navigating romantic and sexual relationships.

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Tables*Table 1. Exploratory Factor Analysis: PAF Extraction with Promax Rotation.*

	Factor	
	1	2
How romantically attractive do you find Michael/Brittany?	.965	-.082
How romantically desirable would you find Michael/Brittany as a dating partner?	.919	.002
How much would you actually like to date Michael/Brittany?	.829	.087
How would you feel about yourself if you were dating Michael/Brittany?	.115	.720
How do you think your friends would feel about you if you were dating Michael/ Brittany?	-.069	.803
How sexually attractive do you find Michael/Brittany?	.970	-.049
How sexually desirable would you find Michael/Brittany as a partner?	.894	.039
How much would you actually like to have sex with Michael/Brittany?	.754	.138
How would you feel would feel about you if you were having sex with Michael/Brittany?	.238	.631
How do you think your friends would feel about you if you were having sex with Michael/Brittany?	.072	.909
Eigenvalues	6.74	1.31
Cumulative % of variance (squared loadings)	64.236	75.387

Table 2. Demographics.

Variable	<i>n</i>	%
Country		
United States of America	292	78.1
India	57	15.2
Venezuela, Bolivarian Republic	6	1.6
Canada	3	0.8
Germany	2	0.5
Australia	1	0.3
Austria	1	0.3
Bulgaria	1	0.3
Colombia	1	0.3
Dominican Republic	1	0.3
Indonesia	1	0.3
Lithuania	1	0.3
Mexico	1	0.3
Romania	1	0.3
Serbia	1	0.3
Singapore	1	0.3
Spain	1	0.3
Sweden	1	0.3
Ukraine	1	0.3
Gender		
Cisgender female (I was born biologically female, and identify as female)	208	54.2

		45
Perspective-Taking and Mentioning		
Cisgender Male (I was born biologically male, and identify as male)	154	40.1
Genderqueer (including agender, bigender, gender fluid, pangender, genderless, third gender, intersex, etc.)	6	1.6
Prefer not to answer	5	1.3
Questioning (I'm exploring and discovering my gender identity)	4	1.0
Other	4	1.0
Transgender Man (I was born biologically female, but identify as male)	3	.8
Political Affiliation		
Democrat	161	41.6
Independent	98	25.3
Republican	76	19.6
Libertarian	28	7.2
Other (please specify)	20	5.2
Green Party	4	1.0
Ethnicity		
White or of European Descent	258	67.0
Asian or Pacific Islander	69	17.9
Black or of African Descent	18	4.7
Hispanic	18	4.7
Biracial or Multiracial	10	2.6
Other	9	2.3
Native American or Native Alaskan	2	0.5
Middle Eastern or of Arab Descent	1	0.3

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Religion Affiliation

Christian	98	25.5
Agnostic	60	15.6
Hindu	59	15.3
Catholic	55	14.3
Atheist	48	12.5
Other	31	8.1
Protestant	16	4.2
Muslim	6	1.6
Wiccan or Pagan	6	1.6
Buddhist	5	1.3
Jewish	1	0.3

To whom are you sexually attracted?

Men	163	42.2
Women	159	41.2
Both Men and Women	58	15.0
Neither Men nor women	3	0.8
Other (please specify)	3	0.8

Perspective-Taking and Mentioning

Table 3. Perspective-taking and Mentioning, Mentioning-only, and Perspective-taking only

Condition	Mean	SD
Perspective-taking and Mentioning	21.54	10.51
Mentioning only	22.36	10.39
Perspective-taking only	23.36	10.61

Note: SD = Standard deviation.

Perspective-Taking and Mentioning

Table 4. Romantic Desirability Ratings of the Targets Across all Conditions.

Condition	Mean	SD
Michael: Perspective-taking with mentioning	18.72	10.04
Michael: mentioning without perspective-taking	20.70	9.79
Michael: Perspective-taking without mentioning	23.56	10.00
Michael: No perspective-taking and no mentioning	20.94	9.24
Brittany: Perspective-taking with mentioning	23.97	10.45
Brittany mentioning without perspective-taking	25.31	10.49
Brittany: Perspective-taking without mentioning	26.36	10.97
Brittany No perspective-taking and no mentioning	26.96	9.90

Note: SD = Standard deviation.

Appendices

Appendix A: Mental State Verbs

1. *Mental State Verb list*. This verb list was adapted and modified from Todd, Simpson, and Tamir (2016). Any tense of the following verbs was used.

Appreciate, assume, believe, choose, chose, decide, expect, feel, felt, forget, forgot, guess, hate, hope, hoping, imagine, knew, know, learn, like, love, notice, perceive, realize, recognize, recollect, remember, think, thought, understand, want, wish

2. Some of the new additional terms. These words and phrases were added when they were discovered in the narratives and used as mental verbs. Words, not on this list that had similar meaning was included to this list:

Concentrate, accept, discovering, has in mind, see (if used as a mental state verb, not physical perception) prefers, psyched, process, looking forward, deeming, interesting, makes a point, want, to make sure, recognize, deter, lift (as in lift his self up mentally), psyched, hopefully, prepare (as in mentally prepare) frustrates, dislikes, focusing, notice, can't stand, came (e.g., came to the conclusion), expecting, pities, notice, resonate.

Appendix B: Interview Vignettes and Mentioning Manipulation

(Aside from the independent variable manipulations described above in the methods section, all transcripts and questions used through the study were identical to the ones below, except the gender/name of the interviewee was changed, depending on the participant's condition.

Participants either read about Brittany or Michael).

1. Condition: *mentioning disability (Female)*

Interview between a Research Assistant (RA), and Brittany (27-year-old-female graduate student)

RA: Okay, Brittany, like we discussed already, I will be recording our conversation and I am interviewing people as part of a study on how much diversity there is within each department. Written transcripts of our interview will also be used as part of another study I am assisting with about how we form social impressions. Are you ready to begin?

Brittany: Sure, yeah.

RA: Let's just start with the basic stuff first. What's your age and ethnicity? If I remember correctly from our brief email correspondence to schedule this interview, you said you were 27 right?

Brittany: Actually, I'll be 28 in about a month and a half. I'm white.

RA: Thanks. Where are you from?

Brittany: Missouri. I came here for graduate school.

RA: What's your marital status?

Brittany: Single.

RA: Tell me a little bit about your interests or hobbies, or to put it another way, how do you like to spend your free time?

Brittany: I'm always listening to music, and trying to find new music. . . that's a big passion of mine. But mostly just typical stuff—hanging out with friends, or grabbing a drink or two when I am not busy with school stuff. I like video games as well, but I don't really have time to play them much anymore as much as I used to.

RA: What kind of music do you like?

Brittany: I think I am all over the board... I like Pop, Rap, and some Rock...like Radiohead, Eminem, and Bruno Mars... R&B, Country, and some Classical stuff, too.

Perspective-Taking and Mentioning

RA: Thanks for sharing that! I am also diverse when it comes to my music preferences. Along those lines, how would you describe your personality?

Brittany: Hmm—I'm pretty funny, at least that's what most of my friends say. I'm always cracking jokes. I always try to keep a positive outlook on life. I am in a wheelchair because of paralysis—I've had paraplegia [paralysis in the lower body] since I was 10. There's challenges, obviously, but nothing I can't get past. Other than that, I am an outgoing person, I like to socialize. I hate being at home. I try to be out doing something as much as I can.

RA: What are plans for the future career wise? Are you working anywhere now?

Brittany: Not right now. I just applied for a graduate assistant position, but I probably won't hear back until closer to the fall semester. I'm in the counseling Ph.D. program right now. In the future, I would love to work with older adults/veterans, someday.

RA: Good choice!

Brittany: Do you study psychology, too?

RA: School psychology, actually. I'll be finished with my doctorate later this year.

Brittany: That's awesome. Congratulations on that.

RA: Thanks. Oh, I forgot I was going to ask you—what was your childhood like?

Brittany: Decent, I guess. My parents divorced when I was around 15, but I am close with both of them; they have been very supportive in pushing me through school and all. It was hard making friends when I was younger. . . I was shy, but as I have got older, it has become easier to make friends.

RA: Were you ever bullied?

Brittany: Nope. Fortunately, I have been lucky there!

RA: That's really good to hear

RA: Do you have any siblings?

Brittany: I have a younger brother who lives with Mom and me. We get along, but we don't have too much in common probably because he is only 12. [Laughing]

RA: [laughing] We're almost done, Brittany, just a few more questions. I am going to give you a few alternatives and you tell me what you prefer, sound good? I'll ask you a couple follow-up questions about some of them.

Perspective-Taking and Mentioning

Brittany: Yeah. Fine by me.

RA: Do you prefer dogs or cats?

Brittany: Dogs mostly.

RA: If you could only choose between watching movies or listening to music, what would it be?

Brittany: Music.

RA: Yeah, that was an obvious one, huh? Since you have already told me some of the music you listen to, what is the most recent movie that you watched?

Brittany: I finally saw *The Revenant* with DiCaprio. Really good.

RA: Final question—there something about you that not many people on campus know about you?

Brittany: Hmm, well—I can speak French, although I am not exactly fluent. I spent some time in France as a kid when my dad had work there, and took a few courses in undergrad.

RA: That's neat. I wish I would have taken the time to learn another language during undergrad. Well, I think that's all. Thanks for taking the time to do this, Brittany.

Brittany: Oh, no problem!

Interview between a Research Assistant (RA), and Michael (27-year-old-male graduate student)

2. Condition: *not mentioning disability (male)*

Research Assistant (RA), and Michael (27-year-old-male graduate student)

RA: Okay, Michael, like we discussed already, I will be recording our conversation and I am interviewing people as part of a study on how much diversity there is within each department. Written transcripts of our interview will also be used as part of another study I am assisting with about how we form social impressions. Are you ready to begin?

Michael: Sure, yeah.

RA: Let's just start with the basic stuff first. What's your age and ethnicity? If I remember correctly from our brief email correspondence to schedule this interview, you said you were 27 right?

Michael: Actually, I'll be 28 in about a month and a half. I'm white.

Perspective-Taking and Mentioning

RA: Thanks. Where are you from?

Michael: Missouri. I came here for graduate school.

RA: What's your marital status?

Michael: Single.

RA: Tell me a little bit about your interests or hobbies, or to put it another way, how do you like to spend your free time?

Michael: I'm always listening to music, and trying to find new music. . . that's a big passion of mine. But mostly just typical stuff—hanging out with friends, or grabbing a drink or two when I am not busy with school stuff. I like video games as well, but I don't really have time to play them much anymore as much as I used to.

RA: What kind of music do you like?

Michael: I think I am all over the board... I like Pop, Rap, and some Rock...like Radiohead, Eminem, and Bruno Mars... R&B, Country, and some Classical stuff, too.

RA: Thanks for sharing that! I am also diverse when it comes to my music preferences. Along those lines, how would you describe your personality?

Michael: Hmm—I'm pretty funny, at least that's what most of my friends say. I'm always cracking jokes. I always try to keep a positive outlook on life. There are challenges, obviously, but nothing I can't get past. Other than that, I am an outgoing person, I like to socialize. I hate being at home. I try to be out doing something as much as I can.

RA: What are plans for the future career wise? Are you working anywhere now?

Michael: Not right now. I just applied for a graduate assistant position, but I probably won't hear back until closer to the fall semester. I'm in the counseling Ph.D. program right now. In the future, I would love to work with older adults/veterans, someday.

RA: Good choice!

Michael: Do you study psychology, too?

RA: School psychology, actually. I'll be finished with my doctorate later this year.

Michael: That's awesome. Congratulations on that.

RA: Thanks. Oh, I forgot I was going to ask you—what was your childhood like?

Perspective-Taking and Mentioning

Michael: Decent, I guess. My parents divorced when I was around 15, but I am close with both of them; they have been very supportive in pushing me through school and all. It was hard making friends when I was younger. . . I was shy, but as I have got older, it has become easier to make friends.

RA: Were you ever bullied?

Michael: Nope. Fortunately, I have been lucky there!

RA: That's really good to hear

RA: Do you have any siblings?

Michael: I have a younger brother who lives with Mom and me. We get along, but we don't have too much in common probably because he is only 12. [Laughing]

RA: [laughing] We're almost done, Michael, just a few more questions. I am going to give you a few alternatives and you tell me what you prefer, sound good? I'll ask you a couple follow-up questions about some of them.

Michael: Yeah. Fine by me.

RA: Do you prefer dogs or cats?

Michael: Dogs mostly.

RA: If you could only choose between watching movies or listening to music, what would it be?

Michael: Music.

RA: Yeah, that was an obvious one, huh? Since you have already told me some of the music you listen to, what is the most recent movie that you watched?

Michael: I finally saw *The Revenant* with DiCaprio. Really good.

RA: Final question— there something about you that not many people on campus know about you?

Michael: Hmm, well—I can speak French, although I am not exactly fluent. I spent some time in France as a kid when my dad had work there, and took a few courses in undergrad.

RA: That's neat. I wish I would have taken the time to learn another language during undergrad. Well, I think that's all. Thanks for taking the time to do this, Michael.

Michael: Oh, no problem!

Perspective-Taking and Mentioning

3. **Condition:** Perspective-taking

Now that you have read the transcript, please take approximately 5 minutes to write a short narrative describing the typical day in the life of Michael in the box below. As you are writing, imagine what Michael might be thinking, feeling, and experiencing as if you were him, looking at the world through his eyes and as if you were in his shoes.

4. **Condition:** No perspective-taking

Now that you have read the transcript, please take approximately 5 minutes to write a short narrative describing the typical day in the life of Michael in the box below.

Appendix C: Filler Questions*Filler questions*

1. What is your first impression of Michael_____?
2. What is your impression of Michael's sexual orientation? (*Heterosexual, Homosexual, Bisexual, Pansexual, Asexual, Questioning, Other*)
3. Please rate how similar you are or think you might be with Michael on the following dimensions (Likert-type scale: strongly disagree to strongly agree: hobbies, mannerism, dislikes, education, appearance, emotional expression, religion, ethnicity, morality, other).
4. Please rate the extent to which you agree that Michael has or probably has the following characteristics or traits (Likert-type scale: 1 *Strongly Disagree* to 7 *Strongly Agree*):
Happy, Extraverted, Aggressive, Charming, Warm, Dependable, Likes to try new things, Shy, Non-sexual, compassionate, Helpless, Creative, Confident, Materialistic, Childlike, Traditional, Naïve, Religious, Independent, Ambitious, Intelligent, Competent, Rude.
5. From this list, pick up to THREE activities or professions that you think this person might be good at doing. Drag the choices on the left into the box on the right. If none you don't feel the person would be good at any of these things, leave them blank (being a musician, being a movie or film critic, being a comedian, being a lawyer, being a teacher, being a psychologist, being a politician, being a motivational speaker, doctor, other).
6. Indicate the extent to which you feel Michael has good moral character, according to your own standards (Likert-type scale: 1 *Extremely bad moral character* to 7 *Extremely good moral character*)

Appendix D: Key Dependent Measures: Romantic and Sexual Desirability

1. *Romantic desirability items* (adapted from Campbell, 1999).
 - a. How romantically attractive do you find Brittany/Michael?
 - b. How romantically desirable would you find Brittany/Michael as a dating partner?
 - c. How much would you actually like to date Brittany/Michael?
 - d. How would you feel about yourself if you were dating Brittany/Michael?
 - e. How do you think your friends would feel about you if you were dating Brittany/Michael?
2. *Sexual desirability items* (adapted from Campbell, 1999).
 - a. How sexually attractive do you find Brittany/Michael?
 - b. How sexually desirable would you find Brittany/Michael as a partner?
 - c. How much would you actually like to have sex with Brittany/Michael?
 - d. How would you feel about yourself if you were having sex with Brittany/Michael?
 - e. How do you think your friends would feel about you if you were having sex with Brittany/Michael?

Appendix E: Narratives Coded With and Without Perspective-Taking

1. *Perspective-taking using first-person language.* Bolded text indicates mental state language criteria.

1a. “**I** wake up early and **look forward** to starting my day. I'm out of the house as quickly as possible because I **hate** being stuck at home. My day is spent at the university, doing my grad work. When I'm not doing school-related stuff, I spend my time socializing or otherwise keeping busy. I don't return home until the evening.”

1b. “On a typical day **I**, Michael, would be starting my day by listening to music. **I like** all sorts of music like rap pop in a little rock. I then would be going to classes since I am working towards my PhD. **I want** to work with older adults and veterans one day and therefore, I continue to **learn** about psychology. Though I have some challenges on a day to day basis, I never allow that to hinder me from getting around campus. All of my friends are supportive and I have a good outlook when it comes to my situation and future.”

2. *Perspective-taking using third-person language.* Bolded text indicates mental state language criteria.

2a. “On a typical day, Michael might be hanging out with his friends when he isn't in class. He's always looking for something to do, and when he isn't with other people, he might have headphones on listening to music while he goes from place to place. He might **feel** relaxed because of the music he **likes** so much and **feel** happy being around his friends; maybe playing video games with them. Being paraplegic and in a wheelchair, it can be hard to get around due to the inaccessibility there is in many places. Without ramps, it would be impossible to get up on higher levels without help from others. Though it can be an inconvenience because of how inaccessible the world can be for people with disabilities, he does not let that **deter** him.”

2b. “Brittany **likes** to listen to music and look for new music to listen to in her free time. She also enjoys going out for drinks and hanging out with friends. She is studying in graduate school during the day.”

3. *No perspective-taking.*

3a. “I am assuming that he has assistance getting ready for the day and perhaps transportation help when needed. He is probably always listening to music as soon as he wakes up either through a personal device or radio. He is in graduate school so he probably has classes at different times throughout the day. Being in grad school he probably has to read a lot. He is waiting to hear back about an assistantship but will have to add that to his schedule. He probably ends the day either studying or hanging out with friends. He probably has someone help with night time routine care as well.”